

Recovery Plan Action Status

Plan Name: Ruth's Golden Aster

Plan Status: Final

Plan Date: 11-Jun-92

Lead Agency: USFWS

Lead Office: Tennessee Ecological Services Field Office

(931)

528-6481)

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Ruth's golden aster (Pityopsis ruthii)	1	1	Study achene dispersal	Partially Complete	Prior to FY 1995		Tennessee Department of Environment and Conservation, Tennessee Valley Authority , U.S. Fish and Wildlife enhancement, USFWS Regional Office 4	Work type not yet selected	Labor type not yet selected	Partially completed by Clebsch and Sloan (1993).
Ruth's golden aster (Pityopsis ruthii)	2	10	Establish cultivated population with Hiwassee plants	Ongoing Current	Prior to FY 1995		Center for Plant Conservation, Tennessee Valley Authority , U.S. Fish and Wildlife enhancement, USFWS Regional Office 4	Research: Propagation	Species Expert	
Ruth's golden aster (Pityopsis ruthii)	3	11	Search for new populations	Complete	Prior to FY 1995	Prior to FY 1995	Tennessee Department of Environment and Conservation, Tennessee Valley Authority , U.S. Fish and Wildlife enhancement, USFWS Regional Office 4	Work type not yet selected	Labor type not yet selected	Clebsch and Sloan (1993) reported on surveys they conducted and those of earlier investigators. No additional populations have been found.
Ruth's golden aster (Pityopsis ruthii)	1	12	Study species/River interactions on the Ocoee	Partially Complete	FY 2000 - FY 2004		Tennessee Department of Environment and Conservation, Tennessee Valley Authority , U.S. Fish and Wildlife enhancement, USFWS Regional Office 4	Research: Habitat Requirements	Contract	Thomson and Schwarz (2006) examined the relationship between annual flows and mean annual growth rates and concluded that greater population performance tended to be correlated with years of intermediate flows. Additional investigation is warranted.

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Ruth's golden aster (Pityopsis ruthii)	1	13	Determine recreation impacts on the Ocoee	Partially Complete	Prior to FY 1995		Tennessee Department of Environment and Conservation, Tennessee Valley Authority , U.S. Fish and Wildlife enhancement, USFWS Regional Office 4	Work type not yet selected	Labor type not yet selected	Herrig and Wyrick (1996) investigated recreationist compliance with signs installed at occurrences in order to prevent access. They recommended some additional protective measures.
Ruth's golden aster (Pityopsis ruthii)	1	14	Ensure highway construction doesn't affect Ocoee population	Ongoing Current	Prior to FY 1995		U.S. Federal Highway Administration, Tennessee Department of Environment and Conservation, Tennessee Valley Authority , U.S. Fish and Wildlife enhancement, USFWS Regional Office 4, Tennessee Department of Transportation	Other: Regulations	Internal Field Assistance	No costs
Ruth's golden aster (Pityopsis ruthii)	1	15	Establish colonies on suitable Ocoee habitat	Not Started			Center for Plant Conservation, Tennessee Department of Environment and Conservation, Tennessee Valley Authority , U.S. Fish and Wildlife enhancement, USFWS Regional Office 4	Work type not yet selected	Labor type not yet selected	
Ruth's golden aster (Pityopsis ruthii)	1	16	Establish cultivated populations with Ocoee plants	Ongoing Current	Prior to FY 1995		Center for Plant Conservation, Tennessee Department of Environment and Conservation, Tennessee Valley Authority , U.S. Fish and Wildlife enhancement, USFWS Regional Office 4	Research: Propagation	Species Expert	

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Ruth's golden aster (Pityopsis ruthii)	2	17	Formalize agreements	Not Started			U.S. Fish and Wildlife Service, Law Enforcement Division, U.S. Forest Service, Tennessee Department of Environment and Conservation, Tennessee Valley Authority , U.S. Fish and Wildlife enhancement, USFWS Regional Office 4	Work type not yet selected	Labor type not yet selected	Completed in FY 1990
Ruth's golden aster (Pityopsis ruthii)	2	18	Establish plots	Complete	FY 1995 - FY 1999	FY 2000 - FY 2004	U.S. Forest Service, Tennessee Department of Environment and Conservation, Tennessee Valley Authority , U.S. Fish and Wildlife enhancement, USFWS Regional Office 4	Management: General	Species Expert	
Ruth's golden aster (Pityopsis ruthii)	1	2	Determine seed germination/seedling establishment requirements	Ongoing Current	FY 1995 - FY 1999		Tennessee Department of Environment and Conservation, Tennessee Valley Authority , U.S. Fish and Wildlife enhancement, USFWS Regional Office 4	Research: Habitat Requirements	Species Expert	Cost can be reduced by combining with Task 3.1
Ruth's golden aster (Pityopsis ruthii)	1	3	Determine role of competition	Not Started			Tennessee Department of Environment and Conservation, Tennessee Valley Authority , U.S. Fish and Wildlife enhancement, USFWS Regional Office 4	Research: Management Techniques	Contract	
Ruth's golden aster (Pityopsis ruthii)	1	4	Define habitat	Not Started			Tennessee Department of Environment and Conservation, Tennessee Valley Authority , U.S. Fish and Wildlife enhancement, USFWS Regional Office 4	Research: Habitat Requirements	Species Expert	

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Ruth's golden aster (Pityopsis ruthii)	1	5	Examine succession on boulders	Not Started			Tennessee Department of Environment and Conservation, Tennessee Valley Authority , U.S. Fish and Wildlife enhancement, USFWS Regional Office 4	Work type not yet selected	Labor type not yet selected	Cost can be reduced by combining with Task 3.3
Ruth's golden aster (Pityopsis ruthii)	1	6	Determine if Hiwassee population is self-sustaining	Partially Complete	FY 2000 - FY 2004		Tennessee Department of Environment and Conservation, Tennessee Valley Authority , U.S. Fish and Wildlife enhancement, USFWS Regional Office 4	Research: General	Species Expert	PVA conducted by Thomson and Schwartz (2006) showed greater short-term risk of extinction for Hiwassee than Ocoee population, however data were not statistically significant.
Ruth's golden aster (Pityopsis ruthii)	1	7	Determine management requirements for Hiwassee population	Ongoing Current	Prior to FY 1995		Tennessee Department of Environment and Conservation, Tennessee Valley Authority , U.S. Fish and Wildlife enhancement, USFWS Regional Office 4	Research: Management Techniques	Labor type not yet selected	USFS w/ assistance from Dow AgroSciences, USFWS, and TVA applied herbicide treatments to two plots on the Hiwassee River to evaluate a method for controlling vegetation.
Ruth's golden aster (Pityopsis ruthii)	2	8	Examine Hiwassee flow regimes	Partially Complete	FY 2000 - FY 2004		Tennessee Department of Environment and Conservation, Tennessee Valley Authority , U.S. Fish and Wildlife enhancement, USFWS Regional Office 4	Research: Habitat Requirements	Contract	
Ruth's golden aster (Pityopsis ruthii)	2	9	Establish additional colonies on Hiwassee	Ongoing Current	FY 1995 - FY 1999	FY 1995 - FY 1999	Center for Plant Conservation, Tennessee Department of Environment and Conservation, Tennessee Valley Authority , U.S. Fish and Wildlife enhancement, USFWS Regional Office 4	Work type not yet selected	Labor type not yet selected	TVA and UT researchers are collaborating to develop protocols for propagation from tissue culture and establishment of seedlings in the wild. This project will require additional funding in order to be completed.